IN THE CLAIMS

Please amend the claims as follows.

1. (Previously Presented)   A method comprising:

validating a header of a packet from a first checksum of the packet;

decrementing a time-to-live field of the header;

recalculating a second checksum of the header;

performing a route lookup; and

forwarding the packet,

wherein the validating a header, the decrementing a time-to-live, the recalculating a second checksum, and the performing a route lookup are performed only once for the packet during transfer among a plurality of ports within a router, wherein the validating a header, the decrementing a time-to-live, the recalculating a second checksum, and the performing a route lookup are performed before the packet is transferred to a switched interconnect/backplane of the router.

2. (Original)   The method of claim 1, wherein the performing a route lookup further comprises:

determining a next-hop; and

determining an egress-port.

3. (Original)   The method of claim 2, wherein the forwarding further comprises:

forwarding the packet in reference to the egress-port.

4. (Canceled)

5. (Previously Presented)   The method of claim 2, wherein the egress-port further comprises a remote port, and the forwarding further comprises:

forwarding the packet to an egress-forwarding element through the switched interconnect/backplane of the router;

applying a switch-label that corresponds to the egress-port and next hop;

determining the next hop and the egress-port on which the packet is to be transmitted in
reference to the switch-label;

removing the label;

completing a layer-2 encapsulation of the packet; and

transmitting the packet over the egress-port.

6. (Previously Presented)   A machine-accessible medium having associated instructions to
direct a machine to perform:

validating a header of a packet from a checksum of the packet;

decrementing a time-to-live field of the header;

recalculating the checksum of the header;

performing a route lookup;

determining an egress-port; and

forwarding the packet in reference to the egress-port of the packet,

wherein the validating action, the decrementing action and the recalculating action are
performed only once for the packet during transfer among a plurality of ports
within a router, and wherein the validating action, and the recalculating action are
performed by only one port of the plurality of ports of the route and are performed
before the packet is transferred to a switched interconnect/backplane of the router.

7. (Canceled)

8. (Previously Presented)   The machine-accessible medium of claim 6 wherein the egress-
port further comprises a remote port, and the forwarding further comprises:

forwarding the packet to the egress-forwarding element through the switched
interconnect/backplane of the router;

applying a switch-label that corresponds to the egress-port and a next hop;

determining the next hop and the egress-port on which the packet is to be transmitted in
reference to a switch-label;

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removing the switch-label;

completing a layer-2 encapsulation of the packet; and

transmitting the packet over the egress-port.

9.-30. (Canceled)

31. (New)   The method of claim 1, wherein performing the route lookup comprises adding to a table of the router a switch-label that identifies a route of the packet.

32. (New)   The method of claim 2, wherein forwarding the packet comprises completing an encapsulation of the packet.

33. (New)   The method of claim 1, wherein performing the route lookup comprises applying a switch-label to the packet, wherein the switch-label uniquely identifies an address within the router in which the address is an address of a port/next-hop on an egress-forwarding element within the router, wherein the egress-forwarding element is one of a plurality of forwarding elements within the router, wherein the forwarding elements are operably coupled to each other through the switched interconnect/backplane.

34. (New)   The machine-accessible medium of claim 6, wherein performing the route lookup comprises adding to a table of the router a switch-label that identifies a route of the packet.

35. (New)   The machine-accessible medium of claim 6, wherein forwarding the packet further comprises completing an encapsulation of the packet.

36. (New)   The machine-accessible medium of claim 6, wherein performing the route lookup comprises applying a switch-label to the packet, wherein the switch-label uniquely identifies an address within the router in which the address is an address of a port/next-hop on an egress-forwarding element within the router, wherein the egress-forwarding element is one of a plurality

of forwarding elements within the router, wherein the forwarding elements are operably coupled

to each other through the switched interconnect/backplane.

37. (New)   An apparatus comprising:

        a plurality of forwarding elements; and

        a control element operably coupled through a switched interconnect/backplane to the

plurality of forwarding elements, the control element comprising a switch-label table manager to

generate a switch-label table for each forwarding element of the plurality of forwarding

elements, wherein at least one forwarding element of the plurality of forwarding elements is to

receive a packet and to perform validating a header of the packet from a first checksum of the

packet, decrementing a time-to-live field of the header, recalculating a second checksum of the

header, performing a route lookup, and forwarding the packet, wherein validating the header,

decrementing the time-to-live, recalculating the second checksum, and performing the route

lookup are performed only once for the packet during transfer among the plurality of plurality of

forwarding elements, and wherein validating the header, decrementing the time-to-live,

recalculating the second checksum, and performing the route lookup are performed before the

packet is transferred to the switched interconnect/backplane.

38. (New)   The apparatus of claim 37, wherein the control element further comprises a route

table manager that maintains a routing table.

39. (New)   The apparatus of claim 37, wherein the apparatus includes a router.

40. (New)   A system comprising:

        a plurality of forwarding elements; and

        a control element operably coupled through a switched interconnect/backplane to the

plurality of forwarding elements, the control element comprising a processor and a software

means operative on the processor to generate a switch-label table for each forwarding element of

the plurality of forwarding elements, wherein at least one forwarding element of the plurality of

forwarding elements is to receive a packet and to perform validating a header of the packet from

a first checksum of the packet, decrementing a time-to-live field of the header, recalculating a

second checksum of the header, performing a route lookup, and forwarding the packet, wherein

validating the header, decrementing the time-to-live, recalculating the second checksum, and

performing the route lookup are performed only once for the packet during transfer among the

plurality of plurality of forwarding elements, and wherein validating the header, decrementing

the time-to-live, recalculating the second checksum, and performing the route lookup are

performed before the packet is transferred to the switched interconnect/backplane.

41. (New)   The system of claim 40, wherein the control element further comprises a route

table manager that maintains a routing table.